

Steamed About Electric

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An MS2 aboard ship was preparing the noon meal when he noticed one of the electric steam kettles was again not working. “This #\$%* kettle ain’t worth a #\$%^!” he muttered. “Time to call the technicians who fixed it last time.”

When the repairman arrived and began to work on the kettle, he found the same old problem: no water inside the kettle and the pressure gauge read zero (which was difficult to determine since the faceplate was missing and the needle was bent).

This scenario plays out daily aboard ship. The cooks blame the A Gang while the A Gang blames the cooks. We must all gather our thoughts and work together to fix this problem, which involves both conventional and electric steam kettles. Remember, the cooks operate the kettles and A Division personnel maintain them. The two should have a strong working relationship to keep the kettles operating. All discrepancies discovered by the mess management specialists should be relayed to A Division as soon as possible.

During numerous shipboard-safety surveys I have conducted, electric steam kettles always stick out like sore thumbs, and I always find many problems. Water levels are low. Safety valves aren’t tested and tagged. The levers and chains to operate safety valves are missing. The kettles aren’t hydrostatically tested and tagged. Pressure gauges are inaccurate. Fasteners on electric-control panels are missing, which could expose operators to electrical shock.

Let’s address operating electric steam kettles. Groen and Legion Industries, Inc., make the electric steam kettles installed aboard all FFGs, DDGs, and those CGs not yet converted to being all electric (once converted, they would have no shore steam connection, and no auxiliary or waste heat boilers). If

you don’t have a technical manual for your kettle, you can download a PDF-formatted copy from Groen’s web site at <http://www.groen.com>.

The regular steam kettle uses steam as a heating source. The electric version uses electricity, but there are also other differences. The Groen kettle has a thermostatically controlled, self-contained, and electrically heated steam supply. Heat is produced by electric-heating elements that boil water in a reservoir in the jacket, producing steam under pressure. The unit is controlled with a thermostat to turn power on and off, and to set the cooking temperature. Instruments show an operator what is happening inside the unit:

- ✓ The water gauge glass shows the level of water within the steam jacket.
- ✓ The pressure/vacuum gauge shows the steam pressure and if there is air in the jacket.
- ✓ The indicator lamp lights when the kettle is being heated.

Check the water level in the jacket every day or before each use. It should be between the maximum and minimum mark on the gauge glass. If low, notify A Gang so they can do PMS Q-1R. Remember to use only distilled water. While the kettle is cold, check the pressure gauge—it should show a reading of 20 to 30 inches of vacuum. A positive pressure, or a reading near zero, indicates air in the jacket or a leak in the system. Air in the jacket will slow kettle heating, while leaks will prevent air pressure from building inside the jacket.

To remove air, start the unit and make sure there is water or food in the kettle when heating. When the pressure and vacuum gauge reaches a positive reading of 5 psig, release the trapped air and steam by pulling (up or out) on the safety-valve lever or ring,

-Steam Kettle Problems?



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for about one second. Repeat this step, then let the pull ring or valve lever snap closed. For leaks in the system, notify A Gang so they can do PMS A-2 (hydrostatic test).

These are just some of the simple things that can go wrong with an electric-steam kettle. For any other problems, the A Gang and EMs will get together to read the tech manual and troubleshoot the discrepancy. PMS on the electric steam kettle is covered under MIP 6520/001-79 (Steam-Jacket Kettle) and MRCs Q-1R and A-2. With proper maintenance and use, your kettle should operate trouble-free for a long time. ☺

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